

Appl. No.: 10/550,770

Amdt. Dated June 22, 2009

Response to Office Action Mailed December 22, 2008

**REMARKS:**

Applicant requests entry of the amendments presented above, and requests reconsideration and withdrawal of the pending rejections of the claims, for the following reasons.

The amended claims, and in particular independent claims 5 and 10, specify the following features of the instant invention:

- 1) The optical modulator has a plurality of optical modulating sections on a single substrate.
- 2) A modulating signal or a DC bias superposed with a low frequency electrical signal is applied into a specific one of the plurality of optical modulating sections.
- 3) DC biases of not only the specific first optical modulating section, but also another, second optical modulating section, are controlled based on the detected change of light intensity corresponding to the low frequency electrical signal from the optical wave exiting from the specific first optical modulating section.

The above-mentioned features of this invention are described in Fig. 8 and in the written description segments related to this figure ( See paragraphs [0107]-[0121] in the U.S. publication of this application ).

New claims 26-29 above clarify that the optical waveguide comprises a structure which has two sub Mach-Zehnder waveguides placed in parallel in each arm of a main Mach-Zehnder waveguide, and that said specific first optical modulating section is one including a first sub

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Mach-Zehnder waveguide, and that said second optical modulating section is one including a second sub Mach-Zehnder waveguide, as shown in Fig. 8 and described in the accompanying written description.

It is respectfully submitted that the references cited by the examiner, taken individually or together, fail to disclose or suggest the features of the claims recited in items 1 through 3 above. In particular, the cited references fail to disclose the item 3 feature above; namely that DC biases of not only the specific first optical modulating section, but also another, second optical modulating section, are controlled based on the detected change of light intensity corresponding to the low frequency electrical signal from the optical wave exiting from the specific first optical modulating section.

*Conclusion.* It is respectfully submitted that the application is in condition for prompt allowance and that all of the objections, rejections and requirements raised in the Office action have been met or overcome. Early, favorable treatment of this application is requested.

The examiner is encouraged to telephone the undersigned with any questions or comments so that efforts may be made to resolve any remaining issues.

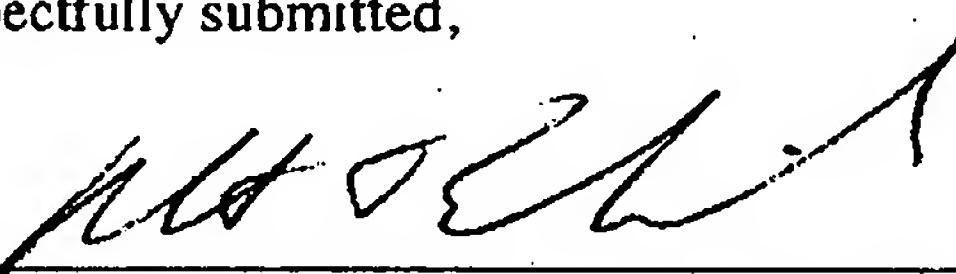
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*Extension Request and Deposit Account Charge Authorization.* The Commissioner is hereby authorized to charge any and all required fees, or credit any overpayment, associated with this communication, including fees for any necessary extension of time under 37 CFR §1.136(a) for filing this communication, which extension is hereby requested, to our Deposit Account No. 50-0305 of Chapman and Cutler LLP.

Respectfully submitted,

By:

  
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Date: June 22, 2009

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**CERTIFICATE OF FACSIMILE TRANSMISSION UNDER 37 C.F.R. § 1.8**

Attorney Docket Number: 1716877  
App. Serial No.: 10/550,770  
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I hereby certify that the attached correspondence, namely: Response to Office Action, with deposit account fee charge authorization, was transmitted by facsimile on the date listed above, to the U.S. Patent Office at the facsimile number listed above, under 37 C.F.R. § 1.8.

Signature: 

Typed Name of Person Signing this Certificate: Robert J. Schneider, Reg. No. 27,383

Date of Signature: June 22, 2009